



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,298	07/10/2003	David Brault	84215-402 ADB	1617

23529 7590 11/08/2006

ADE & COMPANY INC.  
2157 Henderson Highway  
WINNIPEG, MB R2G1P9  
CANADA

EXAMINER

GELLNER, JEFFREY L

ART UNIT

PAPER NUMBER

3643

DATE MAILED: 11/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/616,298

Applicant(s)

BRAULT ET AL.

Examiner

Jeffrey L. Gellner

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 4-17, 20-28, 30, 31, 33-37 and 39-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 4-17, 37 and 39-46 is/are allowed.
- 6) ☒ Claim(s) 20-25, 28, 30, 35, 36 is/are rejected.
- 7) ☒ Claim(s) 26, 27, 33 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____   |

Art Unit: 3643

## DETAILED ACTION

### *Claim Objections*

Claim 37 is objected to because of the following informalities:

In claim 37, line 11, "each air handling system" should be --each one of the plurality of air handling systems-- to conform with the language of line 8.

In claim 37, line 13, "each air handling system" should be --each one of the plurality of air handling systems-- to conform with the language of line 8.

In claim 37, line 16, "each air handling system" should be --each one of the plurality of air handling systems-- to conform with the language of line 8.

In claim 37, lines 18-19, "air handling systems" should be --each one of the plurality of air handling systems-- to conform with the language of line 8.

In claim 37, line 22, "air handling systems" should be --each one of the plurality of air handling systems-- to conform with the language of line 8.

Appropriate correction is required.

### *2Claim Rejections - 35 USC §103*

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20-25, 28, 30, 35, and 36 are rejected under 35 U.S.C. §103(a) as being unpatentable over Takano (JP2000-69858) in view of Meckler (US 5,279,609).

As to Claim 20, Takano discloses a climate control system for use with a greenhouse (Figs. 1, 2, and 4) having an exterior wall of transparent panels comprising a bench (best shown in Fig. 4) arranged to provide a support surface; and, an air handling system (shown in Figs. 1 and 2) comprising a respective duct (region around 6 in Fig. 1), an air intake plenum (7 and 8 of Fig. 1) having at least one air intake (8a of Figs. 1 and 2), a fan (6 of Fig. 1) connected to the plenum, an outlet duct (generally around 10 of Fig. 1) connected to the fan having an air outlet (11 of Fig. 1) from the outlet duct into the interior of the greenhouse, and at least one air conditioning component (9 of Figs. 1 and 2) for conditioning the air transported from the plenum to the outlet duct by the fan, the plenum including at least a part thereof mounted underneath the bench (Figs. 1 and 4); and, the air intake plenum, fan, connections, and outlet connected to the respective duct (see Fig. 1). Not disclosed is a plurality of air handling systems each associated with a respective bench (one to one association). Meckler discloses a plurality of air handling systems each associated with a specific area (Fig. 1 and col. 3, lines 34-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Takano by having the a plurality of air handling systems as disclosed Meckler so as to serve separate comfort air spaces (see Meckler at col. 1 lines 5-10) and to have a correspondence between benches and air handling systems so as to achieve a micro-climate for each bench so as to optimize plant growth on each bench.

As to Claim 21, Takano as modified by Meckler further disclose the outlet duct including a vertical duct section at one end of the bench (region above 6 in Fig. 1 of Takano).

As to Claim 22, Takano as modified by Meckler further disclose a horizontal discharge duct section and extending over the bench (Fig. 2 of Takano).

As to Claim 23, the limitations of Claim 20 are disclosed as described above. Not disclosed is the tube shaped to form an elliptical cross section that is wider than it is high. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Takano as modified by Meckler by having the tube flexible and shaped to form an elliptical cross section that is wider than it is high depending upon cost and availability of tubing.

As to Claims 24 and 25, the limitations of Claim 20 are disclosed as described above. Not disclosed is a heating or cooling coil in the plenum underneath the bench. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Takano as modified by Meckler by having a heating or cooling coil in the plenum underneath the bench so as to moderate the temperature in the greenhouse so as to optimize plant growth.

As to Claim 28, Takano as modified by Meckler further disclose a fan in a housing at the end of the bench (Fig. 1 of Meckler).

As to Claim 30, the limitations of claim 20 are disclosed as described above. Not disclosed is each fan in a fan housing at the end of the bench at an exterior wall. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Takano as modified by Meckler by having each fan in a fan housing at the end of the bench at an exterior wall as a known efficient placement of a fan for cooling a greenhouse.

As to Claim 35, Takano as modified by Meckler further disclose the outlet duct including a vertical duct section at one end of the bench (region above 6 in Fig. 1 of Takano).

As to Claim 36, Takano as modified by Meckler further disclose a horizontal discharge duct section and extending over the bench (Fig. 2 of Takano).

### ***Allowable Subject Matter***

Claims 1, 4-17, 37, and 39-46 are allowed.

Claims 26, 27, 31, 33, and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments filed 7 September 2006 have been fully considered but they are not persuasive (as to the rejected claims herein). Applicants' arguments are: (1) Meckler discloses separate HVAC systems for separate zones such as separate floors which a single greenhouse is a single zone (Remarks page 13, 1<sup>st</sup> to 3<sup>rd</sup> para.); and, (2) Meckler does not disclose an air handling system with an air outlet to the exterior connected to the same duct as the air inlet and outlet of the duct (Remarks page 13, last para., and page 14, bottom half of page).

As to argument (1), Meckler is used to teach having separate air handling systems for each specific zone of a larger zone, such as a building. For a building, the logical smaller zones are rooms. However, for a greenhouse with multiple benches the logical smaller zones are the

Art Unit: 3643

benches, themselves. Each bench then can then have a unique environment so as to optimize the growing of different species of plants in the greenhouse.

As to argument (2), Takano discloses these limitations as stated in the above rejection. The combination of Takano and Meckler is considered proper because both deal with the concept of conditioning air in a zone, or several zones. One of ordinary skill in the greenhouse arts would look to the work of Meckler when considering improvements in HVAC of the greenhouse.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

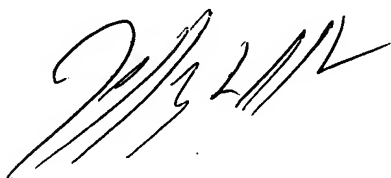
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Gellner whose telephone number is 571.272.6887. The examiner can normally be reached on Monday-Friday, 8:30-4:00, alternate.

Art Unit: 3643

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571.272.6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'J. L. Gellner', with a stylized flourish at the end.

Jeffrey L. Gellner  
Primary Examiner  
Art Unit 3643